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Ref: 8EPR-SR

Ms. Kathi Hooper
Lincoln County Department of Environmental Health
418 Mineral Avenue
Libby, MT 59923

Dear Ms. Hooper

1 am writing in response to your February 14, 2012 memo to me regarding the estimation of health risks associated with open burning activities within the Libby Asbestos Superfimd Site (the Site). An initial telephone discussion was held on March 15, 2012. Participants on the conference call included the Lincoln County Department of Environmental Health (County), the Montana Department of Environmental Quality (MDEQ) and the Environmental Protection Agency (EPA). As discussed during the conference call, the EPA does not have sufficient data to characterize health risks associated with the open burning of woody materials within the Site. This letter summarizes the EPA's discussion during the call, beginning with recommendations for the County to consider when issuing open burn permits, and ending with a summary of the current understanding of the health risks associated with open burning of woody materials within the Site and additional data planned to be collected to further understand this issue.

The EPA suggests that the County consider the following points when issuing permits to conduct open burning of woody materials:

- State of Montana Air Program regulations prohibit the open burning of any materials that contain asbestos. The EPA's sampling shows that Libby Amphibole can be found in tree bark and forest duff throughout the Site. Please contact the MDEQ for further information regarding the interpretation of these regulations.

- The EPA recommends that woody materials should not be burned, if the material is suspected of containing asbestos. It is recommended that this material be disposed of in an approved landfill.

- Preliminary results from the EPA's laboratory that conducted controlled burn tests of forest duff collected from the former W.R. Grace vermiculite mine demonstrate that a portion of the asbestos is released to the air when forest duff is burned. These results also found that the bulk of the asbestos remains in the ash. Therefore, if woody materials that are suspected to contain Libby Amphibole are burned, caution should be exercised in the

handling of the ash. The ash should be moistened to reduce dust generation and be placed in a plastic bag within a plastic bag (double-bagged) before disposal. The ash should not be placed in garden soil or in other areas of the landscape.

The remainder of this letter provides a summary of the current understanding of open burning of woody materials within the Site and of the data planned to be collected to further understand the risks associated with this and related activities.

Libby Amphibole concentrations in ambient air have been collected and analyzed by the EPA periodically since the EPA began Superfund activities in Libby. The ambient air collection regimen typically involves a 5-day continuous sample collection. Therefore, the sample analysis provides an average air concentration of that 5-day collection. As part of that data gathering and analysis activity, the EPA collected data during a number of forest fire events during 2007 and 2008. Those data were summarized in a report referenced in your February 14, 2012, memo to me. The report is entitled: Evaluation of Available Ambient Air Data Collected During Fire Incidents Within Operable Unit 3 of the Libby Asbestos Superfund Site. That report summarized ambient air data collected in Libby during forest fire events of various durations, sizes (acres burned), locations, and distances from the air monitor. The average air concentrations measured ranged from 0.00004 f/cc (the detection limit of the sampling protocol) to 0.0056 f/cc. These data do not demonstrate a correlation to fire size, distance or location. Nor is there any stated correlation to wind speed or direction during the forest fire events. The report states that: "These data indicate that initiating slash pile burns in OU3 is very likely to result in risks to the general public from releases of LA in the smoke that are within acceptable risk levels." This statement restricts the assessment to a very small fire that is a very long distance from the human receptor. It does not provide an assessment of exposure or risk to a receptor close to an open burn such as a fire fighter or a resident burning yard waste. In addition, the report statement is also restricted to an assessment of cancer risk. At the time this report was developed, no toxicity value for a quantification of noncancer hazard of Libby Amphibole asbestos was available. EPA does not anticipate the final toxicity assessment of both cancer risk and noncancer hazard to be available for Libby Amphibole asbestos until spring of 2013.

The EPA does not have empirical data from which to estimate human health risk from asbestos exposure for those in close proximity to a fire fueled by forest materials that contain asbestos. The EPA is currently evaluating alternatives to collect data this year to estimate this health risk.

The EPA is currently collecting data on the release of asbestos fibers from controlled burning of asbestos-contaminated forest duff in a test chamber. The EPA and the US Forest Service will use those data in air models to estimate ambient air concentrations of asbestos and particulate matter (PM2.5) that could result from forest fires at various locations within the Libby Valley. In addition, the EPA is prepared to collect air samples to evaluate asbestos levels in the vicinity of fire fighters responding to forest fires that occur in 2012. These data would be a more representative exposure scenario to residential debris burning. When those data are available, we will provide it to the County to help inform decisions regarding residential burning.

In addition, the EPA is conducting a study to examine the potential for human exposures from buming asbestos-contaminated wood in home heating stoves. Although the EPA has recommended, as a precaution, that wood for home heating not be collected from the Libby Valley due to the potential for asbestos contamination, data is needed to estimate health risks associated with buming asbestos-contaminated wood.

As you may note from the descriptions of the data gathering efforts planned for this year, the EPA is working very hard to provide the information necessary to understand the risks associated with a variety of activities involving environmental media contaminated with asbestos. I hope these studies will help inform not only EPA decision-making, but also important decisions made by the cities of Libby and Troy, the County and the State of Montana. I look forward to future discussions and the sharing of information for the benefit of the Libby and Troy communities.

I hope you find this response helpful in preparing to issue permits for open buming in Lincoln County. Please contact me if you have any further questions. I can be reached by phone at 303-312-6578 or by email at ketellapper.victor@epa.gov.

Sincerely,

Victor Ketellapper, P.E.
Team Leader, Libby Asbestos Superfund Site